



Isotopes Project



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Accomplishments since April '02:

Mass Chain and Nuclide Evaluation

- Submitted:
A=21, 168, 179, 180, 186, 210, 211, ^{59}Zn , ^{92}Sr , ^{173}Au , ^{173}Hg , ^{183}Pb , ^{184}Au , ^{184}Pb (88 nuclides, including 9 priority nuclides)
- Published:
A=170, 171, 186, 189, 210, 235, 239 (76 nuclides)
- Reviewed: 3 mass chains.

DDEP Activity

- Coordinated international collaboration.
- Evaluated 2 radionuclide decays.
- Reviewed 8 radionuclide evaluations.

Web Page Maintenance and Software Support

- Maintained approximately 12 web pages.
- Supported *Isotope Explorer 2* and 3, *WWW Table of Radioactive Isotopes*.
- Served 155,000 distinct hosts who downloaded ~338 Gb data in 2002.

IAEA Coordinated Research Project:

“Development of Database for Prompt Gamma-ray Neutron Activation Analysis”

Led by: R. Firestone, Isotopes Project, LBNL

Participants: China, Hungary, India, Korea, US, Vietnam

Mission: To improve accuracy, completeness and availability of thermal (n, γ) data needed for prompt-gamma neutron activation analysis.

Status:

- Commenced November 1999, final meeting March 2003.
- Produced “EGAF” (Evaluated Gamma-ray Activation File) database of 35,000 evaluated prompt and decay gamma-ray cross-sections for thermal neutron capture on any stable element from H to U.
- Prepared TECDOC publication with CD-ROM (in press).
- Created web site (in press) and developed software for searching database on CD-ROM and on the web.
- Energies and cross sections adopted by the CRP will also be published in *Handbook of Prompt Gamma-ray Activation Analysis* (Kluwer).

Manpower Issues

Isotopes Project:

- **Postdoctoral Position (2-year, structure and decay data evaluation/research):** filled in April 2003 by Shamsu Basunia.
- **Current Isotopes Project Levels of Effort:**
 - Evaluation: 2.18 FTE (staff) + 0.3 FTE (guest).
 - Dissemination: 0.25 FTE.
 - Management, coordination, research: 1.1 (partially supported by DOE money from outside the DOE Data Program).

International:

- **Provided Lecturer** for Structure and Decay Data Evaluator training workshop in Vienna (Nov., 2002).
- **Assisted** three participants in that workshop with subsequent proposal writing and/or ongoing evaluation activities.